

In early February the dry weather became dominant in nearly all parts of the Gulf States and in much of the South Atlantic and southern Middle Atlantic States, and early in March from northern Alabama northward over Tennessee, also over southeastern Arkansas. Usually the States of Oklahoma, Kansas, Missouri (save the southern part), and Iowa had ample moisture till May or later, and the immediate South Atlantic coast, as a rule, was well watered till at least the end of April.

Important portions of the dry area had liberal rains during certain limited periods of time, thus separating the drought into two or more portions. For example, the latter half of April with early May brought temporary relief in most of northern Texas; June gave helpful rains to much of Kansas and Missouri; also to much of southern Georgia, and the districts north of the lower Ohio River; while July and the first fortnight of August had helpful rains in Oklahoma, Arkansas, western Tennessee and northern Mississippi. These rains which came between comparatively dry periods were of prodigious importance in partially saving the important crops, and often were sufficient, in combination with thorough cultivation, to give yields above average for cotton or other staple crops in large portions of the States affected.

Considerable portions of New Mexico and Texas have received as much rain as normal each month since June, but most of southern Texas, also the north-central and northeastern portions, like nearly all States to north-eastward and eastward of Texas, reached the climax of the drought late in the summer.

The last 10 days of August and the opening week of September had remarkably hot and dry weather in the eastern portions of Kansas, Oklahoma, and Texas and practically everywhere eastward to the Atlantic Coast. The corn and cotton crops were much affected by this weather, being greatly reduced in prospects and too rapidly pushed to early maturity.

The end of the drought came by the 10th of September over nearly all parts of Kansas, Missouri, Oklahoma, Arkansas, Louisiana, and northern Texas, and by the middle of September over the lower half of the Ohio Valley and some parts of Tennessee. It was late in September or early in October before some parts of the last-named State and most portions of the Virginias received ample rains, while most portions of the Carolinas and Georgia, and some parts of the East Gulf States were relieved after the middle of October, and a few districts, chiefly in South Carolina, are still but partially relieved.

The dry weather did hardly any damage to field crops anywhere north of the Ohio River, save in southern Illinois and Indiana, but pastures and meadows were

considerably affected in portions of Ohio. In most of southern Missouri and some parts of Kansas, and especially in Arkansas, Tennessee, and North Carolina, and to southward the corn crop suffered greatly. From central Texas southward, in most of Arkansas, Georgia, and the Carolinas, save eastern North Carolina, and in some parts of Alabama the cotton crop was seriously reduced in yield, but the rainfall shortage was not great enough in many important portions to cut the yield to the average, and high quality of crop was reported for an unusually extensive area. Potatoes, tobacco, and oats were seriously hurt in many States and portions of States, while nearly everywhere south of the Ohio River pastures and forage crops were so greatly harmed as to cause vast loss or inconvenience. In several localities sale of cattle for removal or slaughter was found necessary in view of scanty prospective supply of feed for winter. The condition of pastures in the southern Appalachian region, has seldom, if ever, been worse, and here fruit and forest trees in many tracts have been defoliated, and it is feared they will prove to be dead when next spring comes.

The shortage of water was annoying in several districts west of the Mississippi River and was the cause of enormous trouble and expense in large areas east of the Mississippi and south of the Ohio and in the coal-mining region of southern Illinois. Almost everywhere from the lower and middle Ohio River and the middle latitudes of West Virginia and Virginia southward nearly to the southern limits of Mississippi, Alabama, and Georgia, and nearly to the South Atlantic coast, the farm and city supplies were failing or on the verge of failing for several weeks, or in a few districts for months. In the southern Appalachian region the water-power situation was the worst in memory, small streams never before known to fail being dry or reduced to occasional pools, while large streams reached lower stages than any indicated by available records.

When comparison is made with previous droughts it is found that hardly any area west of the Mississippi River has suffered as much as in some one or more previous years. Most of Texas, save the easternmost and north-central counties, had a more serious drought in 1917 than during the present year. From the eastern coast of Texas northeastward to central Mississippi the late months of 1924 were drier than any part of this year, while in the central valleys 1901 set a mark far beyond the drought of the present year. Large portions of the Ohio Valley and the Virginias report that the dryness of 1881 remains the worst in memory, but usually from southwestern Virginia southward and southwestward to the north-central portions of Georgia and Alabama and as far east as the middle counties of the Carolinas the drought of 1925 appears to be the most severe that the region has ever known.

SEVERE LOCAL HAIL AND WIND STORMS, SEPTEMBER, 1925

[The table herewith contains such data as have been received concerning severe local storms that occurred during the month. A more complete statement will appear in the Annual Report of the Chief of Bureau]

Place	Date	Time	Width of path ¹	Loss of life	Value of property destroyed	Character of storm	Remarks	Authority
Oxford (10 miles north of) southeastward into Vance County, N. C.	1	5-6 p. m.	4 mi.	-----	\$250,000	Heavy hail.....	Very heavy crop damage, especially to tobacco..	Official, U. S. Weather Bureau.
Ohio.....	3	-----	-----	14	-----	Thunderstorms...	Storms general over State; with the exception of the wrecking of the airship, Shenandoah, only slight damage resulted.	Cleveland Times (Ohio).
Providence, R. I., and vicinity.	4	8:01 a. m.-12:18 p. m.	-----	-----	-----	do.....	Some damage by lightning.....	Official, U. S. Weather Bureau.
Quincy Wash. (6 miles north of).	5	A. m.	-----	-----	-----	Hail.....	No material damage.....	Do.
Southwestern Douglas County, Wash.	5	P. m.	-----	-----	200,000	Destructive hail...	Apple crop made practically unsalable.....	Do.
Brownstown, Ill.....	6	2 p. m.	367	3	25,000	Wind squall.....	A church and garage wrecked; 12 persons injured..	Do.

¹ Yards when not otherwise specified; mi. signifies miles.

Severe local hail and wind storms, September, 1925—Continued

Place	Date	Time	Width of path ¹	Loss of life	Value of property destroyed	Character of storm	Remarks	Authority
Washington, D. C. (southeast part of).	6	8 p. m.	-----	-----	-----	Wind and rain....	Two persons injured; 2 houses unroofed and a wall blown down.	Evening Star (Washington, D. C.).
Eldorado, Kans., and vicinity.	6	P. m.	-----	-----	-----	Series of wind and rain storms.	Farm homes and barns damaged, and oil rigs wrecked. Other minor damage.	Wichita Eagle (Kans.).
North Kansas City, Mo.	6	do.	234	-----	\$300-400	Small tornado....	One house moved on foundation; small out-houses, poles carrying high tension wires, trees, and telephone poles blown down.	Official, U. S. Weather Bureau.
Paulding County, Ohio.	6	do.	-----	-----	-----	Wind.	Buildings and corn blown down.	Do.
Northeast Shelby County and northwest Marion County, Mo.	7	5 p. m.	3,520	-----	20,000	Thunderstorm and hail.	Roofs and windows damaged; crops ruined over path 30 miles long.	Do.
Hopkins (near), S. C.	7	5 p. m.	-----	1	-----	Thunderstorm....	A negro and a mule killed by lightning.	Do.
Ardmore, Okla. (southeast of).	7	5-6 p. m.	100	-----	1,100	Wind.	Some property damage; slight crop injury; 1 person injured.	Do.
Elmore, Tallapoosa and Montgomery Counties, Ala.	7	P. m.	-----	-----	-----	Wind and rain....	Cotton crop considerably damaged.	Montgomery Times (Ala.).
Steffenville, Mo. (south of).	7	-----	3,520	-----	15,000	Severe hail....	Chickens killed; corn torn up; garden truck injured. Path 10 miles long.	Official, U. S. Weather Bureau.
Mexico, Mo.	8	3 p. m.	440	-----	10,000	Wind and electrical.	Small sheds and a garage demolished; telegraph wires broken halting traffic for a while; 1 building struck by lightning; path 5 miles long.	Do.
Lexington, Mo.	8	3:30 p. m.	350	-----	35,000	Thundersquall....	Trees and poles broken; electric power suspended; considerable damage to city property. Considerable property damage of minor importance; trees blown down.	Do.
Wayne County, Ill.	8	4 p. m.	-----	-----	-----	Wind.	Damage to property and crops, principally by wind, over path 3 miles long.	Do.
Sparta, Ill. (4 miles west and northwest of).	8	5 p. m.	1,760	-----	13,000	Wind and hail....	Much damage to farm buildings; 1 person fatally injured.	Evansville Courier (Ind.).
Southwestern Indiana.	8	5 p. m.	-----	1	-----	Wind and electrical.	Branches, signs, and awnings blown down; telephone and telegraph service interrupted; interurban traffic delayed; 1 person injured.	Official, U. S. Weather Bureau.
Terre Haute, Ind. (west of).	8	6-8 p. m.	30-100	1	500	Wind squall....	10 head of cattle and 3 horses killed; some corn blown down.	Do.
Monmouth, Ill. (vicinity of).	8	-----	-----	-----	-----	Electrical and wind.	Slight damage in place.	Do.
Keokuk, Iowa.	8	-----	-----	-----	75,000	Hail.	Fire caused by lightning destroyed several business properties.	Do.
Armstrong, Ill.	9	A. m.	-----	-----	20,000	Electrical.	Damage to buildings in business section a few blocks wide; 7 or more persons injured by flying glass.	Do.
Peoria, Ill.	9	2:30-2:45 p. m.	-----	-----	-----	Thundersquall....	Extensive property and crop damage; latter estimated at \$100,000. Path 30 miles.	Do.
Walworth, Kenosha, and Racine Counties, Wis.	9	3-4 p. m.	2-5 mi.	1	150,000	Severe wind and hail.	Tobacco badly damaged over path several miles long.	Do.
Lafayette to Bennetts town, Ky.	9	-----	3 mi.	-----	-----	Hail and wind....	No property damage reported.	Do.
Inman, S. C.	9	P. m.	-----	1	-----	Thunderstorm....	Crops, windows, etc., considerably damaged.	Do.
Kokomo, Ind.	9	-----	-----	-----	4,000	Heavy hail.	Four houses burned.	Do.
Montgomery, Ala.	9	P. m.	-----	-----	-----	Electrical.	Trees uprooted, water tank and chimneys blown down, and several large barns wrecked at Pontiac; 2 buildings struck by lightning, barns, silos, telegraph and telephone poles prostrated in and near Fenton; other property damage.	Do.
Southern and central counties, Mich.	9	-----	-----	-----	-----	Thunderstorm, hail and wind.	Building fired by lightning, destroying many agricultural implements.	Do.
Peoria, Ill.	9	11:50 p. m.	-----	-----	125,000	Electrical.	Cotton damaged.	Do.
Cullman and Madison Counties, Ala.	9-10	-----	-----	-----	-----	Wind and hail....	Plate-glass windows broken; trees and a small dwelling blown down; 2 persons injured.	Anniston Star (Ala.).
Anniston, Ala.	10	2:30 p. m.	-----	-----	8,000	Severe thunderstorm and hail.	Large poultry house and garage demolished.	Official, U. S. Weather Bureau.
Bethel, Kans.	10	4 p. m.	160	-----	5,000	Tornado.	Crop damage severe in center of path 20 miles long.	Do.
Plainview, Tex., and vicinity.	10	4-5 p. m.	2,640	-----	65,000	Hail.	Electrical systems damaged; several mules killed; barns leveled; houses struck by lightning; highways obstructed.	Star (Terre Haute, Ind.).
Bicknell, Ind., and vicinity.	10	P. m.	-----	-----	4,000	Thunderstorm....	6 head of cattle killed by lightning; school damaged.	Official, U. S. Weather Bureau.
Floyd, N. Mex.	10	-----	-----	-----	-----	Small tornado....	Small buildings damaged; fruit trees stripped; corn injured; valuable cow killed at Downing.	Do.
Gorin, Mo., and northwest of.	10	P. m.	-----	-----	4,000	Thundersquall....	Damage in places.	Do.
Keokuk, Iowa.	10	-----	-----	-----	-----	Wind and hail....	2 barns burned and some corn prostrated.	Do.
Monmouth, Ill.	10	-----	-----	-----	-----	Electrical and wind.	Several barns destroyed.	Do.
Northern New York.	10	-----	-----	-----	-----	Thunderstorms.	Storm over sparsely settled country; no damage.	Do.
Pines, N. Mex.	10	-----	-----	-----	-----	Severe hail....	Some farm buildings wrecked; 25 dwellings and 3 greenhouses damaged; 1 person injured.	Do.
Wheaton, Ill.	11	1 a. m.	266	-----	50,000	Tornado.	Path 7 miles long.	Do.
Waukegan, Ill. (vicinity of).	11	2 a. m.	-----	-----	6,000	Severe electrical.	Farm buildings and hay damaged by lightning.	Do.
Akron, Mich. (vicinity of).	11	A. m.	880	-----	-----	Hail.	Some property damage; bean crop severely beaten.	Grand Rapids Press (Mich.).
Chicago, Ill.	11	A. m.	-----	-----	-----	Thunderstorm and wind.	Some buildings damaged; trees blown down; parts of city in darkness for several hours.	Chicago Journal (Ill.).
Grand Haven and Grand Rapids, Mich.	11	A. m.	-----	-----	-----	Thunderstorms.	Electric equipment of all kinds affected by storm; interurban car service interrupted; telegraph service impaired.	Official, U. S. Weather Bureau; Grand Rapids Press (Mich.).
Momence, Ill. (east and southeast of).	11	1 p. m.	440	-----	45,000	Wind squall....	Considerable crop and property damage.	Official, U. S. Weather Bureau.
Centralla, Ill.	11	3:30-4:30 p. m.	200	-----	20,000	do.	Orchards and other property damaged considerably; 1 person injured.	Do.
Chelsea, Mich., and vicinity.	11	-----	-----	-----	-----	Severe thunderstorm.	Barns and houses unroofed; telegraph and telephone poles and silos blown down; electric light service crippled.	Do.
Cleveland, Ohio.	11	2:30 p. m.	-----	-----	-----	Thunderstorm....	Electric light service in some sections impaired; trees uprooted; signs torn down.	Cleveland Plain Dealer (Ohio).
Morganville and Wildwood, Ga.	11	-----	-----	-----	-----	High winds.	Numerous trees prostrated.	Official, U. S. Weather Bureau.
Northern Indiana.	11	P. m.	-----	-----	23,000	High wind and a tornado.	Buildings, crops, and timber damaged. Tornado was near South Bend.	Do.
Logan County, Ill.	12	2:30-3:30 p. m.	3,520	-----	85,000	Hail and wind....	Crops damaged to the extent of \$70,000; much glass broken; trees stripped; 1 barn and livestock destroyed by lightning; 3 persons injured.	Do.
Corpus Christi, Tex.	12	-----	-----	-----	-----	Thunderstorm....	Several buildings and a schooner damaged by lightning; other minor property damage.	Do.

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Severe local hail and wind storms, September, 1925—Continued

Place	Date	Time	Width of path ¹	Loss of life	Value of property destroyed	Character of storm	Remarks	Authority
Fort Hancock, McNary, and Acala sections of Texas.	12	P. m.			\$200,000	Hail and rain.	Cotton crop badly damaged.	El Paso Times (Tex.).
Harrisburg, Pa., and vicinity.	12-13				250,000	Thunderstorm and wind.	Corn flattened and other minor damage.	Official, U. S. Weather Bureau.
New York State.	12-13			1	400,000	Electrical wind and rain.	Much damage throughout State, especially in Tonawanda Valley, northwest Wyoming County, where winds were of tornado intensity. Heavy loss of fruit and silage corn, damage to buildings, overhead wires, etc. Several persons injured.	Do.
Scranton, Pa.	13	5:33 - 8:55 p. m.			60,000	Severe thunderstorm.	General damage throughout city reported.	Do.
Terre Haute, Ind.	13	3:20 - 4:45 p. m.			100,000	Thunderstorm.	Public utilities service interrupted; 1 fire by lightning.	Do.
Centre Ossipee, N. H.	13		1,760		6,000	High wind.	A number of homes partially or wholly wrecked.	Binghamton Morning Sun (N. Y.).
Davidson, Okla., and vicinity.	13	5:40 p. m.	3,520		502,000	Destructive hail.	Crops, principally cotton, severely damaged over path 12 miles long.	Official, U. S. Weather Bureau.
Freeland, Pa.	13	5:30 - 5:40 p. m.				Thunderstorm, wind, and rain.	Trees uprooted, chimney blown down, and other minor damage.	Do.
Kenton, Okla. (near).	13					Moderate hail.	Slight damage reported.	Do.
Northeast Washington, northern Frederick, and Carroll Counties, Md.	13					Thunderstorm and wind.	Some corn blown down and trees uprooted.	Do.
Rush, Colo., and vicinity.	13		3 miles		45,000	Destructive hail and thunderstorm.	Heavy crop damage, beans badly beaten, and foliage destroyed over path 38 miles in length.	Do.
Cove, Oreg., and vicinity.	15	1:30 p. m.	3,520		8,000	Heavy hail.	Prune and apple crops injured; roofs and windows damaged.	Do.
Columbia, S. C.	15	3:25 - 4:30 p. m.			10,000	Thunderstorm.	Garage struck by lightning; no other damage reported.	Do.
Cheraw, S. C. (near).	15	P. m.	880		10,000	Heavy hail.	Unpicked cotton damaged.	Do.
Eaton County, Mich.	15					Squall.	Some small buildings, telegraph and telephone poles blown down, blocking main highways.	Do.
Arizona.	15-19					Wind and rain.	Main highway washed out, others impassable; some damage to railway beds.	Do.
Wingville and Pocahontas districts (7 miles north of Baker), Oreg.	16	12:45 p. m.			35,000	Heavy hail.	Considerable loss to fruit, grains, and other crops.	Do.
Columbia, S. C. (13 miles east of).	16	4 p. m.			500	Thunderstorm.	School building struck; 4 persons injured.	Do.
Lake Swamp and Ebenezer, S. C.	16	P. m.			10,000	Severe hail.	Character of damage not reported.	Do.
Cerro Gordo and Worth Counties, Iowa.	16				5,000	Hail.	Hail fell where little damage could be done.	Do.
Hammonton, N. J.	16					Wind.	Inn damaged; trees uprooted; all windows in a bus blown out.	New York Herald-Tribune (N. Y.).
Taylor and Clay Counties, Iowa.	17	P. m.				Electrical and wind.	Telephone, and telegraph poles and wires damaged; buildings damaged in Clay County.	Official, U. S. Weather Bureau.
Tucson, Ariz. (near).	18	5:30 p. m.			2,000	High wind.	Veterans' Hospital damaged.	Do.
Shannon, Ill.	18				500	Wind.	Small building unroofed.	Do.
Yankton, S. Dak.	19	5 p. m.				Thunderstorm.	Several barns and other buildings in suburbs blown down; rural telephone poles and wires prostrated.	Do.
Sioux City, Iowa.	19	6:56-6:58 p. m.	440		750	Wind and hail.	Two buildings unroofed; 240 windows broken.	Do.
Houghton, Mich.	19					Thunderstorm.	Considerable damage to electric circuits; basements flooded; street car tracks covered with sand; pavement in one street destroyed.	Do.
Minneapolis, Minn.	19					Wind.	A number of persons were injured. Character of damage not reported.	Do.
Burlington, Vt.	20					do.	Branches torn off, some trees uprooted causing damage to wires and other property.	Burlington Free Press (Vt.).
Houghton, Mich.	20					do.	Some damage to electric wires; many trees and windows broken.	Official, U. S. Weather Bureau.
Western New York.	20					Wind and electrical.	Trees down, chimneys shattered, billboards wrecked. Some damage by fires; Sayre and other valley towns suffer most.	Buffalo Courier (N. Y.).
Due west, South Carolina.	23		880		1,000	Severe thunderstorm.	Buildings and poles damaged; some damage to Weather Bureau equipment.	Official, U. S. Weather Bureau.
Pecos County, Tex. (north part of).	23		1,760		80,000	Heavy hail.	Heavy crop damage. Buena Vista hard hit.	Do.
Fort Benning, Ga.	24					Wind.	Some tents of the Motor Transportation Corps unroofed.	Do.
Evansville, Ind.	26	5:30-5:45 p. m.			6,700	Thunderstorm and wind.	Trees, signs, and overhead wires damaged; Wild West show tents blown down. Four persons injured.	Do.
Milan, Tenn., and vicinity.	27					Thunderstorm.	Three barns demolished; several roofs torn off.	Do.
Miami, N. Mex.	30	4 p. m.	3,520		500	Severe hail.	No property damage reported.	Do.
Abbott, N. Mex.	30	6-11 p. m.	3 mi.			do.	No crops in path of storm; minor damage.	Do.

¹ Yards when not otherwise specified; mi. signifies miles.

STORMS AND WEATHER WARNINGS

WASHINGTON FORECAST DISTRICT

Small-craft warnings were issued for portions of the north Atlantic coast on the 3d, 7th, 15th, and 20th.

On the evening of the 20th southwest storm warnings were ordered from Sandy Hook to Eastport and were followed by fresh winds along the coast and strong winds off the coast.

Frosts occurred in central and northern New England and northeastern New York on the 23d and again on the 26th. Warnings of the latter were issued the preceding morning, but those of the 23d were not expected, owing to indications of overcast skies.—R. H. Weightman.

CHICAGO FORECAST DISTRICT

The month, as a whole, was rather warm throughout the district, with the exception of Montana, where the temperature averaged below normal.

The distribution of rainfall was irregular, and the monthly total was in excess of the normal, except over the middle Rocky Mountain region and the central Great Plains. There was a considerable excess of precipitation over the middle Mississippi and lower Missouri Valleys.

Because of the advanced season, due to rather high temperature in the early summer and the closing days of August, together with the warm September, crops generally had reached maturity some one or two weeks earlier